



ELECTRONIC TUBE REFERENCE

F9C31

Power - Triode (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Power transmitting triode intended for RF amplification, oscillation, or modulation. Manufacturer documentation emphasizes professional transmitter or industrial RF service with substantial plate voltage, current, and output capability.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	15 V / 135 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
AMPLIFICATION FACTOR	40.5
MAXIMUM PLATE VOLTAGE	15000 V
MAXIMUM PLATE DISSIPATION	20000 W
MAXIMUM CATHODE CURRENT	45 A
<i>Published ratings/characteristics semantically audited; condition-specific operating values preserved in parameter rows.</i>	

Federal F-9C31 three-electrode transmitting tube for RF amplification, oscillator, and Class B modulator service. It uses a thoriated-tungsten multistrand filament and a forced-air-cooled anode rated for 20 kW dissipation.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1962 ITT

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1962 ITT

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Amplification factor	40.5	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	15000 V	—
Maximum plate dissipation	20000 W	—
Peak cathode current	45 A	—
Maximum/full-ratings frequency	20 MHz	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-plate capacitance	40 pF	—
Grid-filament capacitance	46 pF	—
Plate-filament capacitance	5.6 pF	—

CONSTRUCTION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cooling method	Forced air	—

1962 ITT Industrial and Transmitting Tubes

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1962 ITT INDUSTRIAL AND TRANSMITTING TUBES

Section 1 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Amplification factor	40.5	—
Peak cathode current	45 A	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament starting current	200 A	Maximum
Filament cold resistance	0.019 ohm	—
DC plate voltage	15000 V	ClassB Audio
Maximum signal DC plate current	5 A	ClassB Audio
Maximum signal plate input	50 kW	ClassB Audio
Plate dissipation	20 kW	ClassB Audio
DC plate voltage	12000 V	ClassC PlateModulated
DC grid voltage	-3000 V	ClassC PlateModulated
DC plate current	4.5 A	ClassC PlateModulated
Plate dissipation	15 kW	ClassC PlateModulated
DC plate voltage	15000 V	ClassC RF
DC grid voltage	-3000 V	ClassC RF
DC plate current	8 A	ClassC RF

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-plate capacitance	40 pF	—
Grid-filament capacitance	46 pF	—
Plate-filament capacitance	5.6 pF	—



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